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November 2020

ARMY COMMUNICATOR

Expeditionary RSOI

Plus:

- ***Army Cloud Data Plan***
- ***Communications during COVID***
- ***Signal History***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

Contents

The Army Communicator is published as a command information e-publication for the men and women of the United States Army Signal Corps under the provisions of AR 360-1.

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On the Cover

A Reception, Staging, Onward movement, and Integration (RSOI) exercise is held at the National Training Center.
US Army photo

Signal Regimental Team

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Welcome to the November edition of the Army Communicator. Saying that 2020 has been a wild ride is surprisingly somehow an understatement! However, every challenge in life provides an opportunity for personal growth, and I hope that this year we all took advantage of that opportunity by learning something new about ourselves, developing a new skill, and fostering new friendships, virtually and in person. With that being said, it's hard to believe that 2020 is almost over. I hope you all are managing well and I want to thank you for your selfless service, sacrifice, and dedication to the Signal Corps and the United States Army.

While many of you may have already taken advantage of early voting opportunities, Election Day is November 3rd and I want to take this opportunity to reiterate what I mentioned last month: voting is the cornerstone of democracy. Voting is our opportunity to magnify our voice and to have an impact on how our nation moves into the future. I remind you that we have all taken an oath to support and defend the constitution and to obey the lawful orders of those appointed over us. When you are in uniform, you represent the US Army, and the Army is, and will always remain non-partisan.

I would also like to take a moment to thank you for the incredible feedback you've been providing regarding the Army Communicator. For the last few months, many of the articles have come from our readers' suggestions and ideas, which allows us to provide you with the stories and content that are both current and interesting to you. Keep them coming and let our editor know what topics you'd like to see addressed in future Communicators by contacting us directly through email or on Facebook.

As we prepare for the holiday season, I'd ask that everyone remember to practice safety and celebrate safely!

Pro Patria Vigilans!

Understanding the Army Cloud Plan

US Army Chief Information Officer

The Army Cloud Plan outlines the Army's vision for how it intends to use the cloud to ensure Army warfighting forces are stronger, better armed, and more skilled than their adversaries in the use of information technology on the Information Age battlefield.

The plan outlines the strategic objectives and roadmap that will bring about the Army Cloud vision. Under this plan, the Army will implement a multi-cloud, multi-vendor strategy, taking advantage of the latest commercial cloud services with built-in security.

Courtesy graphic

Developed by the Army's Enterprise Cloud Management Office (ECMO), the Army Cloud Plan is part of the Army's Data and Cloud modernization effort. This plan:

- Replaces the Army's 2015 Cloud Strategy.
- Establishes cARMY, an authorized and accredited general purpose cloud environment. Many Army apps and data systems have been moved into cARMY.
- Allows the Army to take full advantage of advances in digital warfare, autonomous robotics, and artificial intelligence to maintain digital overmatch against near-peer adversaries and non-state actors.

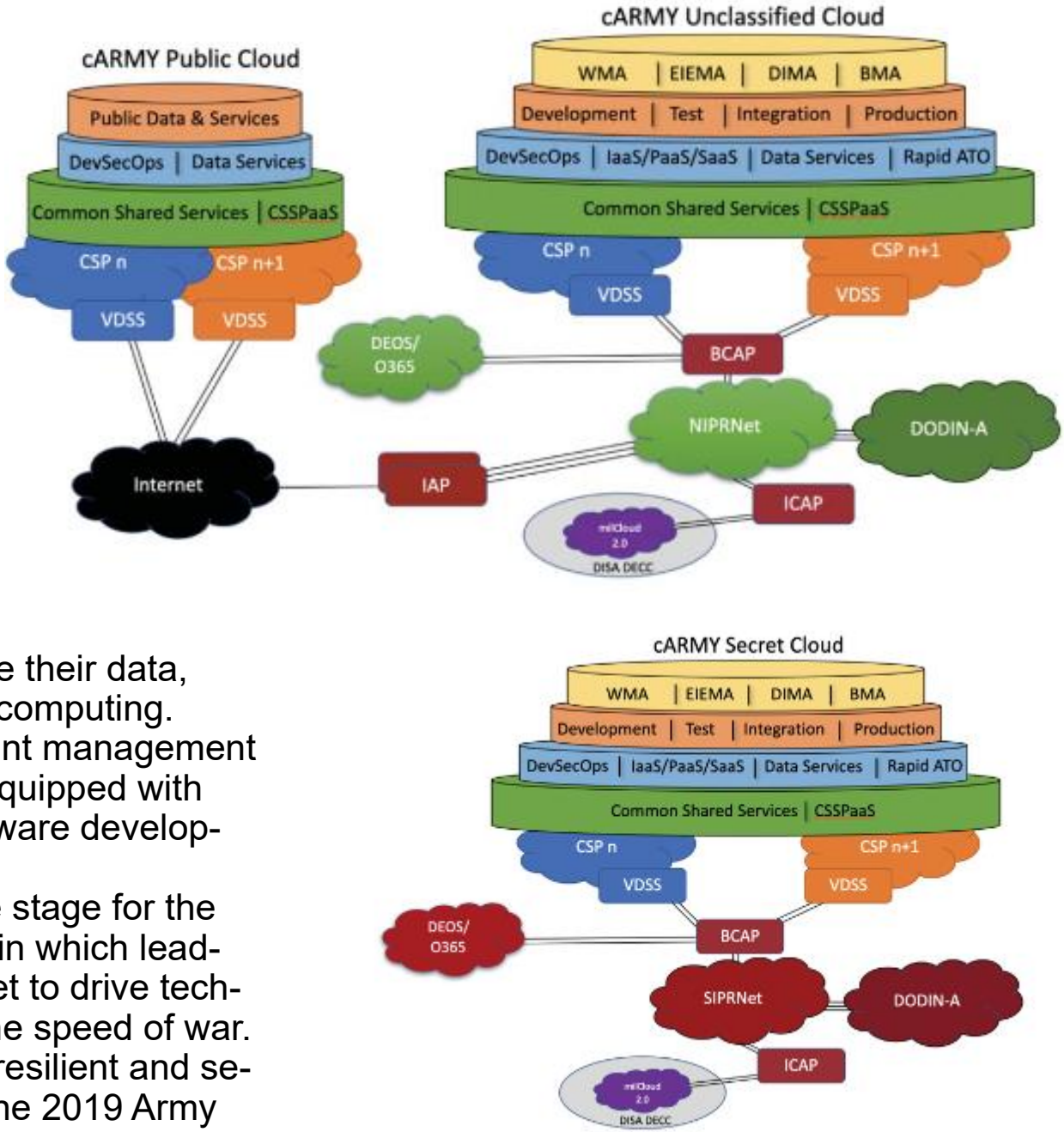
•Provides Army the ability to securely deploy computing resources on-demand to networked users around the globe and will shorten IT system acquisition times from years to days.

The Army will continue to update and improve the Army Cloud Plan as it gains experience using the cloud. Other continued efforts in the cloud plan include:

•Delivering common shared services, including cybersecurity services, to enable Army customers to operate in the cARMY cloud environment, operationalize their data, and take full advantage of cloud computing.

•Developing and executing a talent management plan to ensure the workforce is equipped with the necessary data science, software development and cloud design skills.

The Army Cloud Plan sets the stage for the rise of a more data-centric Army in which leaders wield data as a strategic asset to drive technology and decision-making at the speed of war. This plan will help to establish a resilient and secure cloud solution as stated in the 2019 Army Data Plan.

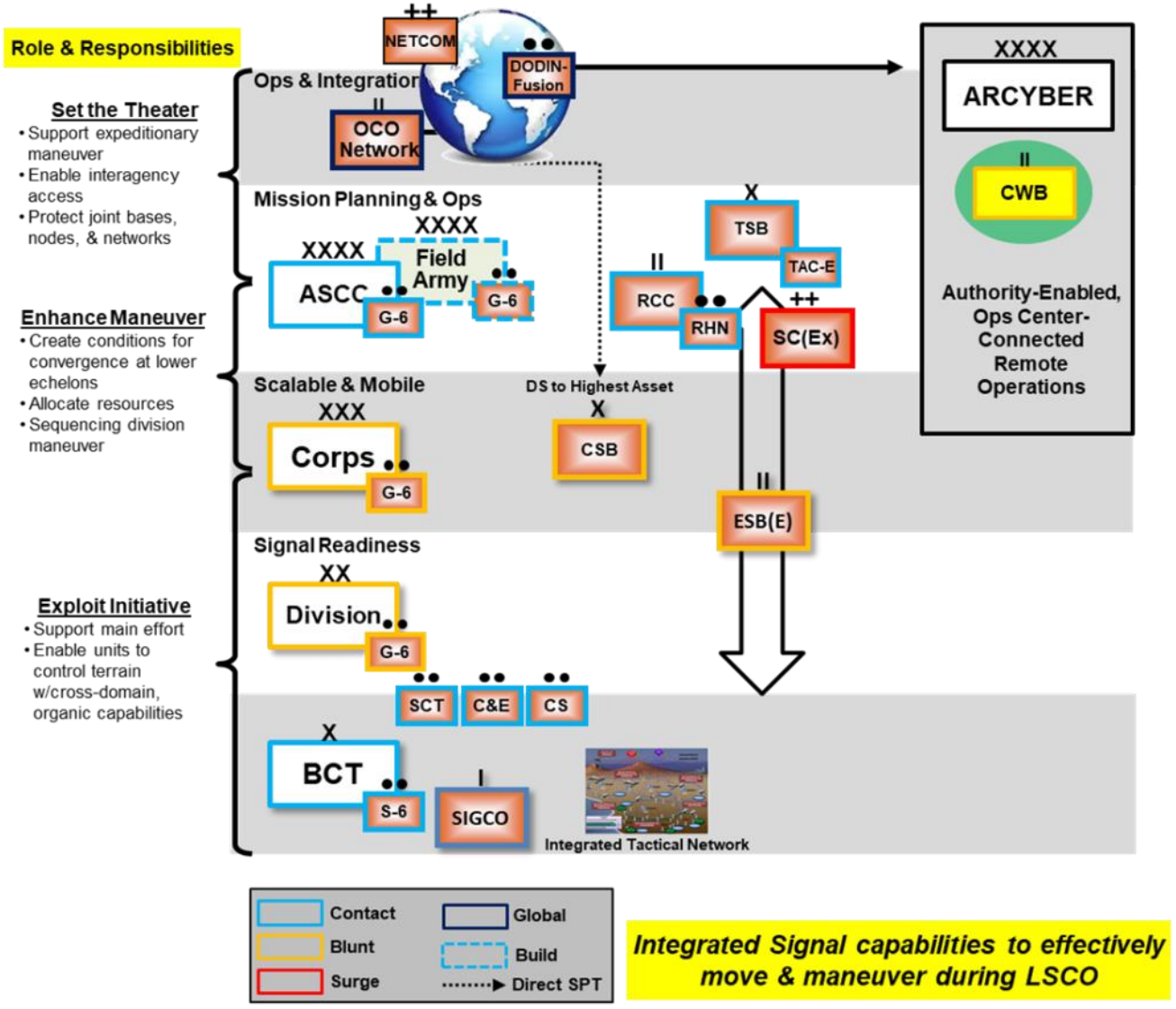


Visual representation of the Army Title 10 Enterprise Cloud ecosystem
Courtesy graphic

Reshaping the Signal Regiment for Multiple Domain Operations

Maj. Pedro Negronbetancourt
and Mohandas M. Martin
Cyber Center of Excellence

In 2015, Chief of Staff of the Army (CSA) directed United States Army Training and Doctrine Command (TRADOC) to lead a Signal end-to-end DOTMLPF-P assessment and Tactical Signal Pilot (TSP) with three proofs of concept: a new DIV SIG BN; secondly, an enhanced G6/S6; and a Joint Communications Support Element (JCSE)-like formation to replace the current Expeditionary SIG BNs (ESBs). Both assessments were initiated in 2016 and culminated with the development of Gap 15 solutions. The transition from General (GS) to Direct (DS) Signal Support Model. Gap 15 solutions realign Signal capabilities from FORSCOM-retained GS formations to DS capabilities assigned to supported commands. For example, the Integrated Signal Framework figure below, at the Corps eche-



Courtesy graphic

lon, Theater Tactical SIG BDEs (TTSBs) have been redesignated as Corps SIG BDEs (CSBs), have received enhanced network management capabilities to better support Corps area signal requirements, and are now directly assigned with their subordinate ESBs to their supported Corps HQ (active component CSBs only).

In March 2019 the Cyber Center of Excellence (CCoE) held the first Signal Top table Exercise (TTX) in the past 10 years to validate among senior Signal leaders an integrated Signal framework to build solutions. Consequently, back to our figure starting at the top: The Department of Defense Information Network Fusion (DODIN-Fusion) was overhauled with additional personnel to create a globally integrated (DODIN) operations, planning and synchronization element. The Offensive Cyber Operations Signal Battalion (OCO-SB) the current non-attributable network, is provided by 3x National Guard Cyber Protection Teams- reducing Cyber combat power. This solution uses Signal to install, operate, and conduct routine maintenance to this network. The Theater Signal Brigade (TSB) increased manning of Theater Strategic Signal Brigades (TSSB) to conduct DoDIN operations to support strategic/tactical networks and support Command and Control (C2) up to 2x Expeditionary Signal Battalions. The Regional Cyber Centers (RCC) were standardized with a military manning structure. This standardization in military personnel will enhance training and readiness levels and allow the RCCs to be globally interconnected but regionally focused. The Signal Commands (SC) (Expeditionary) enable Signal Commands for expeditionary operation with one focused east of CONUS and the other focused west with the ability to C2 multiple CSBs and TSBs. The CSBs augment each TTSB with additional DODIN-Ops capacity to C2 multiple Expeditionary Signal Battalions enhanced ESB(E)s with increased capability. The ESB(E) capability has been increased for 48x supported command posts with lighter more scalable equipment capable of commercial travel. In addition, the new ESB(E) organizational design, equipment, and concept of operation provides increased scalability and flexibility to support expeditionary communications requirements at all echelons. For example, current communications capabilities within a standard ESB consist of three different preconfigured assemblage types with fixed manning requirements. The new family of ESB(E) enhanced early entry and increase mobility capabilities in

Sgt. 1st Class Patrick O. Huggins tests the Squad Area Network capability during the Network Modernization Experiment .
Photo Jasmyne Douglas

50th ESB (E) Maintenance Soldiers Conducting RESET Operations.
Photos provided by Lt. Col. Mallory A. Wampler

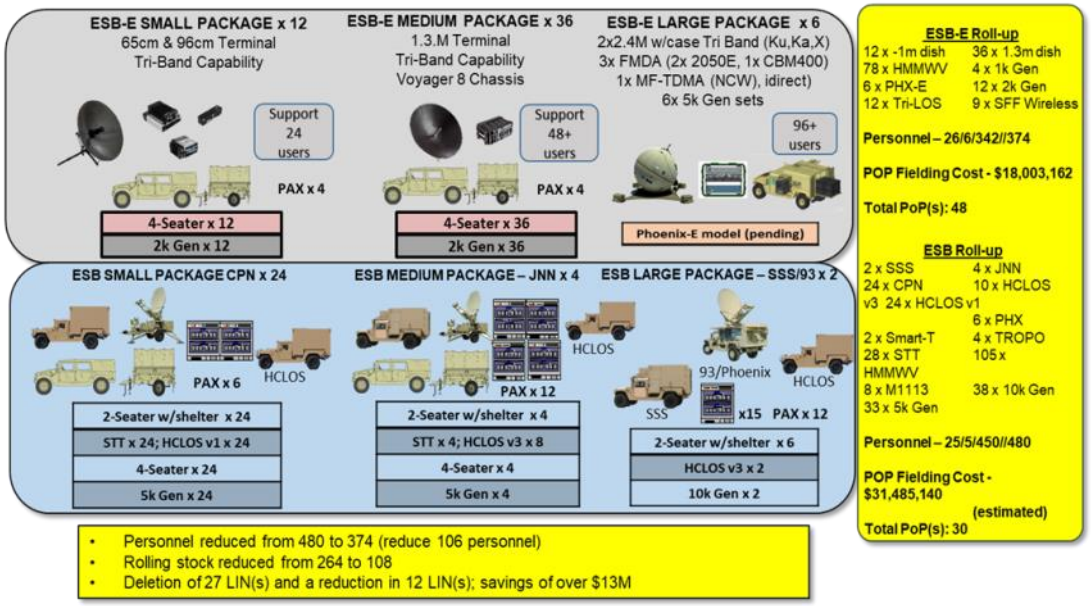
contested environment, this allow commanders the flexibility to customize communications packages and Signal support teams for specific mission requirements. The G6 was augmented with additional cyber security and maintenance contact teams. The S-6 was also augmented with 25Us at the maneuver battalions and maneuver line companies. This will provide an increase in capability in order to support Integrated Tactical Network (ITN) operations, and additional network operations, cybersecurity, and C&E maintenance capabilities at all echelons.

With the intent to improve leadership, Gap 15 solutions applied at the corps level have the potential to refine and strengthen leadership/ mentorship opportunities between the Corps G-6 and Corps Signal Brigade (CSB) commanders. For example, an opportunity exists to designate the Corps G-6 as a new FCSL 25A position. This would make him/her the senior Signal officer at the corps echelon, responsible for overseeing the establishment of networks forward of the operational support area to enable expeditionary maneuver.

The Corps G-6, with the experience and credibility that comes with being a previous CSB commander, would provide guidance and advice to assigned CSB leaders on how to effectively move the network in a way that meets the operational commander's intent, subsequently fostering leader development.

Solutions and resources have only been applied to AC forces and will require additional resources to support future Reserve Components (RC) implementation. The Army National Guard (ARNG) and United States Army Reserves (USAR) are aware of the implementation challenges and are developing a supportable resourcing strategy.

In conclusion the Signal Corps has utilized internal force structure to eliminate or mitigate risk and posture the Signal Regiment for success during large scale combat operations.



Graphic provided by Lt. Col. Mallory A. Wampler

Functioning Commo builds situational awareness during Expeditionary RSOI

Lt. Col. Rett B. Burroughs
Operations Group Senior Signal Trainer

Our National Training Center (NTC) rotation is looming. Our unit is eight days from beginning expeditionary reception, staging, onward movement, and integration (ERSOI) at the NTC. The Brigade Executive Officer, the entire Brigade S6 staff, and all BN S6's look out the windows of the torch party bus after a long trip from home station. As the team steps off the bus into a puff of dust at LSA Santa Fe and scan their ID cards, the line haul from home station is busy unloading a myriad of satellite trailers, Joint Network Node trucks, HCLOS, SMART-Ts, sensitive items containers, and a water buffalo a short distance away, creating its own dusty cloud of activity. It is hot and dry out here. Several hundred vehicles and

US Army photo

containers are slowly moving into the rail yard down the hill at Yermo. That will have to wait for now. First priority: get that water buffalo filled. Second priority, open the container we identified at home station holding our MREs. Now let's begin building combat power.

How does a Brigade Combat Team get communications functioning quickly to build situational awareness so that the unit can rapidly flow in and build combat power in this rugged, austere environment? Here are some tactics, techniques, and procedures (TTPs) for preparing at home station for the daunting mission awaiting you at the NTC. Two different areas on which commanders must focus and guide staffs to plan against are (1) home station Command and Control Validation Exercise (C2VE) and Pack out/load out, (2) actions on the ground in the Brigade TAA, and transition to the offense. We will discuss each of these in detail and create an efficient plan to build situational awareness (SA) while building combat power in the desert.

US Army photo

Often, units will arrive at the NTC having only rehearsed Tactical Operations Center (TOC) operations and staff battle drills once or twice at home station. Some units will undergo their first TOC experience while in contact. They arrive with equipment that has not been updated in recent months and operators who have never used their computers. This is unfortunate as it only increases the amount of stress, work, and lack of understanding in a short window before rolling into the box.

On the obverse, we do see several units who take the initiative and time to train at home station, conduct multiple training exercises, keep their mission command systems updated and their staffs and operators trained and efficient on their systems. Those units come out here in a much better position and leverage this smaller learning curve to create those efficiencies immediately on arrival to gain SA and build combat power.

For those units who do not train enough at home station, and the commander acknowledges this to be the case, it is advisable for all C2 nodes to consolidate near the Brigade TOC and conduct a full Communications Exercise (COMMEX). This COMMEX will often take a full week and push into ERSOI. Once complete with the COMMEX, the Battalion CPNs can starburst out to their BN Tactical Assembly Areas (TAAs).

For well-trained units with up to date systems, validated just prior to loading up on the line haul, commanders can confidently deploy those systems directly to their BN TAAs and begin the C2VE, led by the XO or S3. To get to this level, let us discuss two key aspects of proper use of time and resources. While still at home station, the Brigade should leverage the experience of the Division staff and their experience. Units where the Division headquarters was directly involved in helping the Brigade prepare are easy to identify in

an NTC rotation.

So what does a proper command post exercise (CPX) timeline at home station look like? Every CPX is broken down in three parts and is normally a 15 day event. Day one is establishing the TOC by the entire staff so they know their workspace, with all equipment needed to run it is located. Days 2-5 are the COMMEX. This only involves the S6 teams. They need time on their systems and build out the network with no distractions. It is the commander's responsibility to protect the S6 teams from the myriad distractions of home station. Days 6-10 are the C2VE. It is critical to get this right and not to defer this to the S6, which is a common error. This is led by the S3 and XO while the S6 moves to a supporting role. The senior field grades must lead this event to ensure each staff section can function properly and know their roles inside the TOC and its operations. Day 11 begins execution of the CPX. Most units go right into the third stage and neglect the previous two stages. Do not allow this to happen. This three stage process will not work without the commander protecting the staff from other distractions and enforcing the process.

As pack out begins at home station, the staff must take the time to deliberately plan how containers are packed and where equipment is inside those containers. Deferring to sections and assuming everyone is packing in accordance with a thin, invalidated TACSOP and not a deliberate plan will prove disastrous at NTC when unloading. This lack of planning becomes apparent when units require multiple "red ball expresses" as teams find they left critical equipment at home.

Containers should be synchronously packed from back to front in order of when equipment is needed, with water jugs and MREs at the door. These are the first items you will need. Shade is a must out here and must be easily available. If shelter systems are not issued to the individual Soldier at CIF then sleep arrangements under shade must be properly planned. Having a thorough load plan diagram and inventory will make all the difference. If you are unable to line haul your commo equipment, then spray paint the knuckles of those containers orange prior to loading them onto rail cars. This will help your commo containers stand out in a sea of containers at the rail head. Those then get moved up the Manix trail first.

Identify your Primary, Alternate, Contingency, Emergency (PACE) plan early in your planning process. It allows flexibility as you backwards plan from movement into the offense all the way back to departing home station. Most units will use civilian cell phones, applications, and unsecure email to coordinate movement. Once the unit is on the ground, the enemy is watching and listening. We also see that cell phone use stifles using

US Army photo

US Army photo

our C2 systems. Leaders will lead with their cell phones if you let it happen. Turn them off early in the process and ruthlessly enforce it. Lives depend on it.

It is important to get containers opened and the P in your PACE established ASAP. For most units, this is FM. Having the proper radios, cables, batteries (in a separate container), antennas, and hand mics located immediately will allow the unit to load COMSEC and establish the BDE Command NET. COMSEC is issued by Operations Group as early as the unit requests. Now that the entire BDE TAA is up on FM comms, JBC-P TOC Kits should be deployed as soon as the generator and power distribution units are set up and running. Let's get them plugged in, COMSEC loaded, and sending SITREPs and messages to the BDE TOC so the XO can begin tracking the unit's status.

As the tactical internet is established via the COMMEX, the Brigade and Battalion XO and S3 must lead the staffs in the C2VE as previously mentioned and cannot be emphasized enough. This is not something that can be left to the BDE or BN S6. They are busy building out the rest of the network, establishing and validating retransmission (RETRANS) teams (if not done at home station), and assisting in level 20 and 30 tasks to get a robust communications network ready for transition into the fight.

Units that embrace the role of the S3 and XO as leading the C2VE are always the units who have trained at home station multiple times and have rehearsed the unit's battle drills prior to deployment. The staff members all understand their role in the C2VE and do not take precious time away from the S6 for 10 level operator tasks in which all of our Soldiers should be proficient. Units that do not have trained staffs that know how to set up their own workstations always rely on the S6 to do this, causing other priorities to fall by the wayside and causing the transition plan into the fight to falter. This begins a snowball effect of inefficiency in critical areas that the BDE Commander must have ready on Training Day 1, such as validated RETRANS teams staged for follow on missions, and establishing redundant links between Brigade and Battalion TOCs with HCLOS, SNAP terminals, or SMART-Ts.

To get communications functioning quickly, it takes the entire team. It cannot all be done by the S6. Commanders, staff leaders, operators, and the S6 all have their roles to prepare their own equipment. Establishing systems by PACE, easily pulled out of containers sequentially, that have been planned beforehand, will lead to rapid understanding during this critical transition from home station, to the TAAs, and into the fight. We validate teams down at the team and squad level in other Warfighting Functions. Let us not neglect our Signal teams at echelon to ensure those teams and squads get into the fight and help lead us to victory.

The fight for COMMs in the time of COVID-19

Sgt. 1st Class Dwayne Prymer
25ID Signal Support Platoon S6 NCOIC

Change is often accompanied by adversity. Adversity provides the opportunity for both innovation and success. The Infantry's fight is to attack and contain all enemies on the battlefield. The Artillery's fight is to shape the battlefield. The fight for air space is controlled by the aviators. All are impossible without the most important fight being won outright, the fight for COMMS.

The Corona Virus, also referred to as COVID-19 has changed everyday life. Social distancing has becoming the new norm under the stress of the global pandemic. With concern to the force, the virus has interrupted personnel movement, training and morale. It has disturbed opportunity and proficiency among the force. Still, some have found ways to create and sustain productivity during the outbreak.

A Soldier scans his wrist and face at a terminal newly installed to screen for high temperatures .
Photo by Master Sgt. Michel Sauret

Many would argue that 2020 has been stolen due to ruined opportunities for movement, advancement and new adventures; and because of travel restrictions many units have excess personnel and has left some units without key leaders. This is especially damaging to CMF25 personnel. While training has changed and slowed for Combat Arms Soldiers, the adversity has intensified for Signaleers. Squads were reduced to duos and the need for cross training has never been more apparent. The concept that more personnel means more production shines true. Speed and productivity drops significantly for a network team reduced to minimal personnel. Even more so for radio-re-transmission teams and satellite terminal teams.

COVID-19 has stifled training and has significantly changed the way Soldiers plan, execute, and maneuver. Risk mitigation is a term used throughout the Army, in nearly every discussion, from PRT to formations and movement. Warrior Task and Battle Drill training is now overly modified to incorporate social distancing. Weekly Sergeants Time Training and even Preventive Maintenance Checks and Services (PMCS) have changed seemingly overnight; still the mission stays the same. The expectations grow bigger and the pressure for mission success grows exponentially.

In addition, morale is a mixed bag. Some personnel are happy to telework away from the flagpole. They have found a freedom in solitude and has used the COVID-19

induced “Stay at Home Order” to re-invent themselves and work on physical fitness and bonding with their families. Others have a different point of view. Some have an unquenchable thirst to be in the thick of training and the busy schedule of being at work. However, both views agree that COVID-19 has provided both opportunity and adversity. With no known current solution to totally contain the pandemic, many ask the questions of how and when? How do we move forward? How do we progress? How do we sustain? How do we meet our milestones and operate as Soldiers? The answer is opportunity and innovation. Since the start of the pandemic, the worry of maintaining proficiency and keeping up with the ever-changing Information Technology and Telecommunication spectrum has been at the forefront of questions birthed by COVID-19.

Leaders like Sgt. Gerardo Flores of the Signal Support Platoon viewed the challenges of COVID-19 as opportunity to teach and train his team. He used his knowledge of how young Soldiers learn and interpret information into today’s climate. Using that information, he enrolled his Soldiers into multiple networking classes with the intent of developing and maintaining operational knowledge and proficiency.

Many of these courses utilize virtual environments to provide students with near peer hands on training. Today’s Soldiers coming into the Army have the privilege of growing up in the internet environment. Virtually everything can be accessed through the internet. Sgt. Flores used his abilities as a young NCO to operate and win in an ambiguous environment. His efforts contribute greatly to how our new Soldiers operate successfully. A true leader embodying the “be, know, do” concept.

Many times in a chaotic environment, leaders must find ways to accomplish mission essential tasks. During COVID-19, Staff Sgt. Joshua Bosworth reviewed, digested, and developed an amazing training plan

A Soldier wears personal protective equipment at a coronavirus testing site.
Photo by Cpt. Brendan Mackie

to achieve the Division Artillery's (DIVARTY) long fought goal of establishing HF/AFATDS interoperability. First, consider that in the DIVARTY there is a core group of Mission Command Fires Support personnel dedicated to developing and teaching Artillery operations and supported equipment. Imagine a team not having the capability to meet this requirement. Imagine further that one Soldier is the answer; Staff Sgt. Bosworth is that Soldier. He successfully linked the DIVARTY to external Brigade asset and successfully conducted AFATDS fire mission over HF.

As we meet the fiscal year, training comes into view once again. Many units are rusty and worried about how they will perform. There are so many adversities that we must plan for and overcome. The question of how, still looms. There are leaders who have worked through the winter to maintain success. For example, Sgt. 1st Class Timothy Jones used minimal personnel and teleworking to posture the DIVARTY for success. Without the calamity of too many in person meetings and customers randomly requesting information and assistance, he was able to develop a system to provide services and assistance to the staff remotely which allowed them to maintain their efforts on their respective projects. Once again, opportunity leading to innovation.

Simple precautions, such as masks in workspaces, allow Soldiers to continue operational duties.
Photo by Master Sgt. Matt Hecht

In closing, the fight for COMMS is never ending. We hear COMMs and we think radios and computers and fancy lights and cables however, it is so much more. It is personnel. It is opportunity. It is innovation. It is success. What the pandemic has taught us is that it can stop the Infantry. It can deter the Artillery. It can slow the Aviators. But there is no way to stop the fight for COMMs. The success in establishing and maintaining COMMs directly impact a unit's success in executing its mission. If Sgt. 1st Class Jones had not stayed the course and implemented a remote system for personnel to continue operations the DIVARTY would most likely be far behind its adjacent BDEs instead of at the fore front. Coming out of the initial "Stay Home Order" leaders like Staff Sgt. Bosworth were ready to introduce a new way of communicating across the battlefield. Leaders like Sgt. Flores found ways to improve his shared knowledge base in a seemingly broken environment. All done through adversity. Moreover, change is often accompanied by adversity. The fight for COMMs is accustomed to both change and adversity. It is how we thrive in an ambiguous and chaotic environment.

“Switchboard Soldiers” of the Great War

Linda Jantzen
Colonel, US Army,
Retired

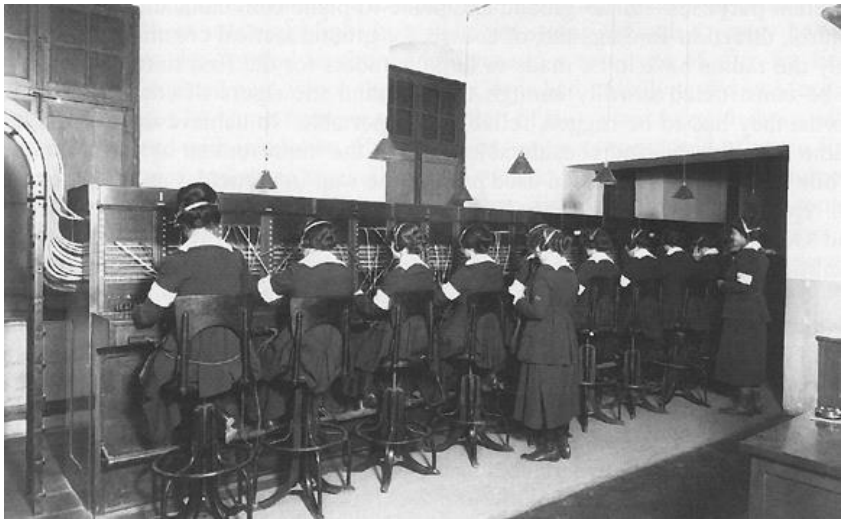
The first unit of women telephone operators, posing after a night of German bombardment on their first night in Paris. Courtesy photo

Modern Signaleers can relate to the challenges of deploying to a foreign land, often working with people they never met prior to being brought together by war. Once the planning, training, and preparation are done and the equipment and personnel are underway, thoughts turn to how the team will manage to assemble the equipment, install it, and make it work. Even if it does work, will it be scalable and grow fast enough to meet the demands of combat? Does the team have the expertise to make complex, fragile, and perhaps cutting edge and experimental technologies work under austere conditions? Everyone is counting on the Signaleers and their technology, from the commanders and soldiers in the field to the logisticians to the intelligence and medical providers, and even your international and interagency partners.

So it was for Signaleers when the US entered the Great War in 1917. The advanced communications technologies of the time were the telephone and the infrastructure of equipment needed to connect thousands of

users over long distances and difficult terrain. The personnel required to install such a network included skilled cable splicers, linemen, heavy construction workers, test men, clerks, drivers and mechanics. Once the equipment was in place, the speed with which calls could be connected and circuits maintained was dependent upon the patience, nerve, and skill of the switchboard operators. In 1917, women made up at least 80% of telephone operators employed in the US. Whatever their qualifications, however, women were prohibited by regulation from serving in the US Army.

As early as 1916, the US Army recognized that the scale and complexity of modern warfare demanded a rapid, reliable, and interoperable communications network which would require specialized expertise to acquire, install and operate. The War Department established a Signal Reserve comprised of such experts to be ready to respond during a national crisis. The United States already had, relative to European countries, a vast, commercially run telephone and telegraph network that connected all parts of the country. This network facilitated all manner of economic, government related, academic and social transactions while the telephone companies invested in continuous improvement of the network's reach, capacity and speed. Army leaders likewise recognized the potential military advantages of direct telephone voice contact for command, control, and coordination of troops across long distances. They expected, and demanded, to fight by telephone.



Hello Girls operating switchboards in Chaumont, France during World War I
Signal Corps Historical photo

Breaking from an Army tradition of filling Signal positions with men detailed from the ranks of the infantry, Maj. Gen. George Squier, Chief of Signal, built the Signal Reserve in close cooperation with American Telephone and Telegraph (AT&T), Western Electric, Western Union. He hand-picked the seed cadre for a force that would eventually grow to 56 field signal battalions, 33 telegraph battalions, 12 depot battalions, 6 training companies and 40 service companies totaling 2,712 officers and 53,277 men. Signal units were called upon to replicate on French soil a telephone network of American scale, capacity and reliability. In cooperation with their French allies and industry partners, they built a massive network extending from the Atlantic coast to the American battle zone in France. This remarkable network was comprised of no less than 2,000 miles of pole lines, 28,000 miles of wire, and 40,000 miles of combat lines, interconnecting with French and British international circuits through 273 telephone exchanges plus numerous tactical switchboards throughout the combat zone.

By November 1917, Gen. John J. Pershing, commander of the American Expeditionary Forces (AEF), had a vast communications infrastructure at his disposal. But soon the demand for telephone calls across the theater of operations exceeded the ability of

Army switchboard men to quickly connect them. Success required far more than pure mechanical proficiency. The men often had to negotiate connections with French and British switchboard operators, who spoke with a different language or a strong accent, and used protocols and procedures with which the Americans were unfamiliar. Prioritizing military necessity over the Army's prohibition against women**,** Pershing cabled the War Department and wrote, ''On account of the great difficulty of obtaining properly qualified men, request organization and dispatch to France a force of women telephone operators all speaking French and English equally well.'' The War Department sent press releases to newspapers across the United States to recruit women willing to serve for the duration of the war and face the hazards of submarine warfare, aerial and artillery bombardment. These articles emphasized that patriotic women would be ''full-fledged Soldier[s] under the articles of war'' and would ''do as much to help win the war as the men in khaki who go 'over the top.' ''

Just as had happened when the call went out for technically qualified men to join the Signal Reserve, the response from women telephone professionals was overwhelming. More than 7,600 women volunteered for the first 100 positions. Among the first recruits to be selected and take the Army oath in January, 1918 were Grace Derby Banker from New Jersey and Inez Ann Murphy Crittenden from California. Hailing from opposite ends of the country, they had in common a unique blend of leadership, technical and linguistic expertise that Pershing was looking for. Like their male counterparts, they had a strong desire to contribute their talents to the American war effort. The Army appointed Banker and Crittenden to the rank of Chief Operator and selected them to lead the first and second units of bilingual telephone operators deployed to France in March, 1918. They were the "Switchboard Soldiers," as Pershing referred to them, but more popularly known as the "Hello Girls."

As is regular practice for the Signal Corps, most of the operators arrived before many combat units in order to provide communications support for the massive logistical operation of deploying the AEF. "The use of female telephone operators in France," according to the official report of the Chief Signal Officer, "was decided upon for two reasons. The first of these was the unquestioned superiority of women as telephone switchboard operators…and the second was the desire to release for service in the more dangerous telephone centrals at the front the male operators on duty in the larger offices."

Soon after the arrival of the Hello Girls, telephone service in France improved immediately, as calls tripled from 13,000 to 36,000 per day. Even-

Grace Banker
Courtesy photo

tually a total of six units of Hello Girls would deploy, bringing the number of calls per day to 150,000. When the war ended on November 11, 1918, 223 women operators had served in France and collectively they had connected 26,000,000 calls for the AEF.

In recognition for their exceptionally meritorious service in the US Signal Corps during the Great War, the current Chief of the Army Signal Corps recently inducted Chief Operators Banker and Crittenden as **"**Distinguished Members of the Regiment" (DMR)**.** Their lives and accomplishments over a century ago exemplify some of the remarkable people in the history of the Signal Corps who led the Army's efforts to adapt during periods of rapid social and technological change.

Banker was trained as a switchboard operator with AT&T in New York City, and later became a "long lines" (long distance calls) instructor. As an expert switchboard operator and fluent French speaker with evident leadership traits, Banker was chosen as the Chief Operator in charge of the first unit of women to sail for France. She and her pioneering team were greeted on their first night in Paris by an aerial bombardment, followed later that day by Germany artillery rounds that continued to rain on Paris almost daily until the end of the war. Soon after the arrival in Paris of additional units of operators, Banker's unit of 33 women was split into three teams, with Banker leading 11 operators to support Pershing's headquarters in Chaumont-sur-Haute-Marne, about 170 miles west of Paris. Five months later, Col. Parker Hitt, the Chief Signal Officer of AEF's First Army, requested "French speaking, excellent operators, in good physical condition" to support First Army Headquarters in Ligny-en-Barrois, south of Saint-Mihiel. Banker along with five more of the best operators were selected to move to the forward command post on August 25, 1918. Weeks later they moved again with First Army headquarters to Souilly, near Verdun, remaining at their post despite the austere living and working conditions, and being close enough to the battle to see the flash and feel the concussion of the guns.

After the Armistice went into effect on November 11, 1918, Banker found peacetime duty in Paris at the temporary residence of US President Woodrow Wilson to be wholly unsatisfying. She wrote in her personal memoir, "We missed the First Army with its code of loyalty and hard work. We were back in the petty squabbles

Inez Ann Murphy Crittenden
Courtesy photo

of civilian life...". She opted for a position supporting the Army of Occupation in Coblenz, Germany, until finally returning home nearly a year after the Armistice. As a testament to her extraordinary achievements, Banker was one of just 18 out of 16,000 eligible Signal Corps officers who served in the war to be awarded the Distinguished Service Medal. Thirty of her fellow operators received special commendations, many signed by Pershing himself, for ''exceptionally meritorious and conspicuous ser-

vices'' in ''Advance Sections'' of the conflict.

Crittenden led the second contingent of Hello Girls, which sailed for France just days after Banker's. Crittenden was well qualified for Army leadership due to her maturity, years of supervisory experience, expertise in speaking French, and her "commanding presence." Once in France, she was frequently commended for her efficiency at running the Paris telephone exchange, providing translation, monitoring and relaying classified messages and maintaining operational security of war plans. In a May 1918 letter to the Chief Signal Officer of the AEF, the Telegraph Officer supervising Crittenden stated, "I have left to her… almost the entire management of the Paris exchange and have caused her to reach out to our branch telephone exchanges in Paris, in order that she may impress her personality upon the telephone operators employed in these different exchanges. We are improving our service every day through her efforts."

Both Grace Banker and Inez Crittenden were posthumously named Distinguished Members of the Regiment by the US Signal Corps.
Courtesy photo

By August, 1918, Crittenden's talents were recognized and her services requested in a by-name request from the Director-General for Europe, American Committee on Public Information (CPI). She served long enough in the CPI to be commended for her service, but tragically lost her life on November 11, 1918, one of two women deployed with the Signal Corps who died in France in service to her country. Both succumbed to the same influenza pandemic that killed more US Soldiers than died in combat.

Crittenden was buried with full military honors at the US Military Cemetery in Suresnes, outside of Paris. Yet the inscription on her headstone reads "Civilian." Like her fellow switchboard operators, she was classified by the US government to be a contract employee rather than a Soldier. This despite the fact that they had never signed a contract, had taken the oath, wore uniforms with Signal Corps insignia and "dog tags," worked alongside military men. Nevertheless and overriding the objections of Gen. Squier, the Army denied Signal Corps women the veterans' benefits granted male Soldiers, Army nurses, and even female Sailors and Marines who spent the duration of the war on US soil. Finally, more than 60 years after the war, Congress passed legislation that retroactively acknowledged "the service of women who went to France during World War I in order to serve as telephone operators for the U.S. Army Signal Corps,'' the GI Bill Improvement Act of 1977 (Public Law 95–202; 91 Stat. 1433). The surviving Signal Corps telephone operators applied for, and were granted, status as veterans in 1979.

Although Banker and Crittenden have long since passed away, their recognition as "Distinguished Members of the Regiment" is particularly meaningful not only for the current and future Signaleers inspired by their story, but for the direct descendants of the two women.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